

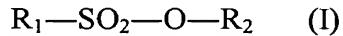
AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

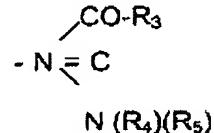
Claim 1 (currently amended): ProcessA process for curing amino resins, characterized in that comprising curing layers with thicknesses having a thickness of up to 300 μm or filaments or fibrils with a diameter of up to 300 μm and comprising

- ea) from 95 to 99.95% by mass of solvent-free meltable amino resin polycondensates having molar masses of 1 000 to 300 000,
- fb) from 5 to 0.05% by mass of curing agents which can be activated by actinic light and are composed of
- b1) acid formers of the type of blocked sulphonic acid of the general formula (I)

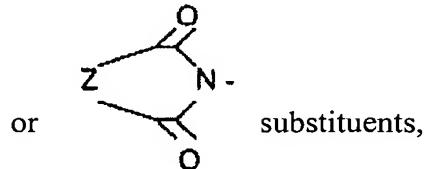


R_1 = unsubstituted or substituted aryl, biphenyl or alkyl,

R_2 = 4-nitrobenzyl, pentafluorobenzyl,



substituents



Z = C₆-C₂₄-aryl, C₆-C₄-alkyl, C₆-C₄-alkenyl, C₇-C₈-bicycloalkenyl,

where

R_3 = non-substituted or substituted alkyl or aryl,

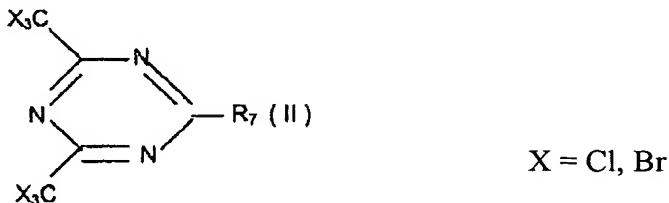
R_4 = H, C₁-C₁₂-alkyl, phenyl, C₂-C₉-alkanoyl or benzyl,

R_5 = H, C₁-C₁₂-alkyl or cyclohexyl

or R_3 and R_4 or R_5 together with the atoms to which they are attached form a 5- to 8-membered ring which can be fused by 1 or 2 benzo radicals,

and/or

- b2) halogen-substituted triazine derivatives of the general formula (II)



R₇ = C₁-C₁₆-alkyl, alkoxy,

C₁-C₁₆-aryl

biphenyl, naphthyl,

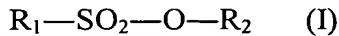
and/or

- b3) onium salts of the type of aryldiazonium salts, diarylhalonium salts, triarylsulphonium salts, triarylselenonium salts and/or N-alkoxypyridinium salts, and if desired

- g) from 1 to 20% by mass, based on the meltable amino resin polycondensates, of non-modified and/or modified maleic anhydride copolymers, and/or
 - h) from 0.1 to 5% by mass, based on the meltable amino resin polycondensates, of nanoparticles in the form of phyllosilicates, hydrophilic or hydrophobic synthetic silicas, calcium carbonate or metal oxides of the ZnO, SnO, Al₂O₃ or TiO₂ type.

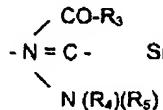
are cured by irradiation with actinic light at a temperature between the melting point of the amino resin polycondensate and the thermoinduced decomposition temperature of the light-activable curing agents, and if desired are subjected optionally subjecting the layers, filaments or fibrils to a thermal aftercure below 250°C.

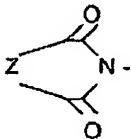
Claim 2 (currently amended): Process The process for curing amino resins according to Claim 1, characterized in that wherein the acid formers of the type of blocked sulphonic acid of the general formula



are blocked sulphonic acids in which the substituents

R_1 = unsubstituted or singly or multiply halogen-, C_1-C_4 -haloalkyl-, C_1-C_{16} -alkyl-, C_1-C_4 -alkoxy-, C_1-C_4 -alkyl-CO-NH-, phenyl-CO-NH-, benzoyl- and/or nitro-substituted C_6-C_{10} -aryl or C_7-C_{12} -arylalkyl,

R_2 = 4-nitrobenzyl, pentafluorobenzyl,  substituents,

or  substituents,

Z = C_6-C_{24} -aryl, C_2-C_4 -alkyl, C_2-C_4 -alkenyl,
 C_7-C_8 -bicycloalkenyl,

where

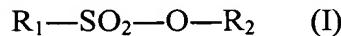
R_3 = C_1-C_{12} -alkyl, C_1-C_4 -haloalkyl, C_2-C_6 -alkenyl, C_5-C_{12} -cycloalkyl, unsubstituted or singly or multiply halogen-, C_1-C_4 -haloalkyl-, C_1-C_{16} -alkyl-, C_1-C_4 -alkoxy-, C_1-C_4 -alkyl-CO-NH-, phenyl-CO-NH-, benzoyl- and/or nitro-substituted C_6-C_{10} -aryl and/or C_7-C_{12} -arylalkyl, C_1-C_8 -alkoxy, C_5-C_8 -cycloalkoxy, phenoxy or $H_2N-CO-NH-$, -CN, C_2-C_5 -alkyloyl, benzoyl, C_2-C_5 -alkoxycarbonyl, phenoxy carbonyl, morpholino, piperidino, C_1-C_{12} -alkyl, C_1-C_4 -haloalkyl, C_2-C_6 -alkenyl, C_5-C_{12} -cycloalkyl, unsubstituted or singly or multiply halogen-, C_1-C_4 -haloalkyl-, C_1-C_{16} -alkyl, C_1-C_4 -alkoxy, C_1-C_4 -alkyl-CO-NH-, phenyl-CO-NH-, benzoyl- and/or nitro-substituted C_6-C_{10} -aryl, C_7-C_{12} -arylalkyl, C_1-C_8 -alkoxy, C_5-C_8 -cycloalkoxy-, phenoxy- or $H_2N-CO-NH-$,

R_4 = H, C_1-C_{12} -alkyl, phenyl, C_2-C_9 -alkanoyl or benzyl

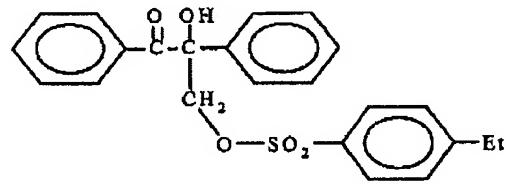
R_5 = H, C_1-C_{12} -alkyl or cyclohexyl,

or R₃ and R₄ or R₅ together with the atoms to which they are attached form a 5- to 8-membered ring which can be fused by 1 or 2 benzo radicals.

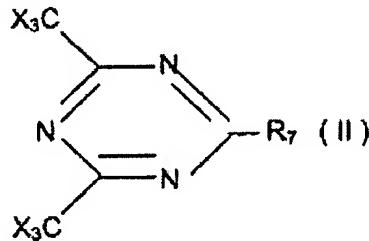
Claim 3 (currently amended): ~~Process~~The process for curing amino resins according to Claim 2, ~~characterized in that~~wherein the acid former of the type of blocked sulphonic acid of the general formula



is a blocked sulphonic acid of the structure



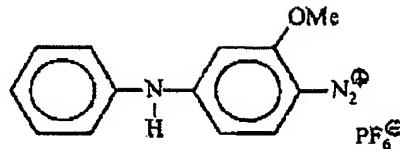
Claim 4 (currently amended): ~~Process~~The process for curing amino resins according to Claim 1, ~~characterized in that~~wherein the acid formers of the type of halogen-substituted triazine derivatives of the general formula (II)



are halogen-substituted triazine derivatives in which

X = Cl and R₇ = p-methoxyphenyl.

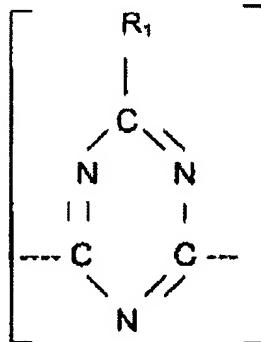
Claim 5 (currently amended): ~~Process~~The process for curing amino resins according to Claim 1, ~~characterized in that~~wherein the onium salt is an onium salt of the formula



Claim 6 (currently amended): ~~Process~~ The process for curing amino resins according to Claim 1, characterized in that wherein the amino resin polycondensates are polycondensates of melamine resins, urea resins, cyanamide resins, dicyandiamide resins, sulphonamide resins and/or guanamine resins.

Claim 7 (currently amended): ~~Process~~ The process for curing amino resins according to Claim 1, characterized in that wherein the polycondensates of melamine resins are mixtures of melttable 4- to 1000-nucleus polytriazine ethers,

wherein the polytriazine ethers the triazine segments



$R_1 = -NH_2, -NH-CHR_2-O-R_3, -NH-CHR_2-O-R_4-OH, -CH_3, -C_3H_7, -C_6H_5, -OH, phthalimido-, succinimido-, -NH-CO-C_5-C_{18}-alkyl, -NH-C_5-C_{16}-alkylene-OH, -NH-CHR_2-O-C_5-C_{18}-alkylene-NH_2, -NH-C_5-C_{18}-alkylene-NH_2, -NH-CHR_2-O-R_4-O-CHR_2-NH-, -NH-CHR_2-NH-, -NH-CHR_2-O-C_5-C_{18}-alkylene-NH-, -NH-C_5-C_{18}-alkylene-NH-, -NH-CHR_2-O-CHR_2-NH-,$

$R_2 = H, C_1-H_7-alkyl:$

$R_3 = C_1\text{-}C_{18}\text{-alkyl, H;}$

$R_4 = C_2\text{-}C_{18}\text{-alkylene,}$

$-\text{CH(CH}_3\text{)}\text{-CH}_2\text{-O-}C_2\text{-}C_{12}\text{-alkylene-O-CH}_2\text{-CH(CH}_3\text{)}\text{-, -CH(CH}_3\text{)}\text{-CH}_2\text{-O-}C_2\text{-}C_{12}\text{-}$

$\text{arylene-O-CH}_2\text{-CH(CH}_3\text{)}\text{-,}$

$-\text{[CH}_2\text{-CH}_2\text{-O-CH}_2\text{-CH}_2\text{]}_n\text{-, -[CH}_2\text{-CH(CH}_3\text{)}\text{-O-CH}_2\text{-CH(CH}_3\text{)}\text{]}_n\text{-,}$

$-\text{[-O-CH}_2\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{]}_n\text{-,}$

$-\text{[(CH}_2\text{)}_{2\text{-}8}\text{-O-CO-}C_6\text{-}C_{14}\text{-arylene-CO-O-(CH}_2\text{)}_{2\text{-}8}\text{-]}_n\text{-,}$

$-\text{[(CH}_2\text{)}_{2\text{-}8}\text{-O-CO-}C_2\text{-}C_{12}\text{-alkylene-CO-O-(CH}_2\text{)}_{2\text{-}8}\text{-]}_n\text{-,}$

where $n = 1$ to 200;

- polyester sequences containing siloxane groups, of the type

$-\text{[(X)}_r\text{-O-CO-(Y)}_s\text{-CO-O-(X)}_r\text{]-}$

in which

$X = \{(CH_2)_{2\text{-}8}\text{-O-CO-}C_8\text{-}C_{14}\text{-arylene-CO-O-(CH}_2\text{)}_{2\text{-}8}\text{-}\}$ or

$-\{(CH_2)_{2\text{-}8}\text{-O-CO-}C_2\text{-}C_{12}\text{-alkylene-CO-O-(CH}_2\text{)}_{2\text{-}8}\text{-}\}$

$\begin{array}{c} C_1\text{-}C_4\text{- alkyl} \quad C_1\text{-}C_4\text{- alkyl} \\ | \quad | \\ Y = -\{C_6\text{-}C_{14}\text{-arylene-CO-O-}(\{Si\text{-O-}}[Si\text{-O}]_y\text{-CO-}C_6\text{-}C_{14}\text{-arylene-}} \\ | \quad | \\ C_1\text{-}C_4\text{- alkyl} \quad C_1\text{-}C_4\text{- alkyl} \end{array} \quad \text{or}$

$\begin{array}{c} C_1\text{-}C_4\text{- alkyl} \quad C_1\text{-}C_4\text{- alkyl} \\ | \quad | \\ -(O\text{-CO-}C_2\text{-}C_{12}\text{-alkylene-CO-O-}(\{Si\text{-O-}}[CO]_z\text{-CO-}C_2\text{-}C_{12}\text{-alkylene-CO-}} \\ | \quad | \\ C_1\text{-}C_4\text{- alkyl} \quad C_1\text{-}C_4\text{- alkyl} \end{array} ;$

$r = 1$ to 70; $s = 1$ to 70 and $y = 3$ to 50;

- polyether sequences containing siloxane groups, of the type

$\begin{array}{c} C_1\text{-}C_4\text{- alkyl} \quad C_1\text{-}C_4\text{- alkyl} \\ | \quad | \\ -\text{CH}_2\text{-CHR}_2\text{-O-}(\{Si\text{-O-}}[Si\text{-O}]_y\text{-CHR}_2\text{-CH}_2\text{-}} \\ | \quad | \\ C_1\text{-}C_4\text{- alkyl} \quad C_1\text{-}C_4\text{- alkyl} \end{array}$

where $R_2 = H$; $C_1\text{-}C_4\text{-alkyl}$ and $y = 3$ to 50;

- sequences based on alkylene oxide adducts of melamine, of the type of 2-amino-4,6-di-C₂-C₄-alkylenamino-1,3,5-triazine sequences;
- phenol ether sequences based on dihydric phenols and C₂-C₈ diols of the type of -C₂-C₈.alkylene-O-C₆-C₁₈-arylene-O-C₂-C₈-alkylene- sequences;

are linked by bridge members -NH-CHR₂-NH- or -NH-CHR₂-O-R₄-O-CHR₂-NH- and -NH-CHR₂-NH- and also, where appropriate, -NH-CHR₂-O-CHR₂-NH-, -NH-CHR₂-O-C₅-C₁₈-alkylene-NH- and/or -NH-C₅-C₁₈-alkylene-NH- to form 4- to 1000-nucleus polytriazine ethers with a linear and/or branched structure,

where in the polytriazine ethers the molar ratio of the substituents R₃:R₄ = 20:1 to 1:20 and the fraction of the linkages of the triazine segments through bridge members -NH-CHR₃-O-R₄-O-CHR₃-NH- is from 5 to 95 mol%.

Claim 8 (currently amended): ~~Process~~The process for curing amino resins according to Claim 1, ~~characterized in that~~wherein the curing of layers of amino resins takes place continuously by irradiation of the melt layer of the amino resin polycondensate applied to moving carrier materials.

Claim 9 (currently amended): ~~Process~~The process for curing amino resins according to Claim 1, ~~characterized in that~~wherein the curing of filaments or fibrils of amino resins takes place continuously by irradiation of the filaments or fibrils, discharged as a viscous melt, following the fibre-forming operation.

Claim 10 (currently amended): Amino resin products, ~~preferably sheetlike textile structures or coatings, produced according to one or more of Claims 1 to 9~~Claim 1.

Claim 11 (new): The amino resin products according to Claim 10 as sheet textile structures or coatings.

- Claim 12 (new): The amino resin products according to Claim 2 as sheet textile structures or coatings.
- Claim 13 (new): The amino resin products according to Claim 3 as sheet textile structures or coatings.
- Claim 14 (new): The amino resin products according to Claim 4 as sheet textile structures or coatings.
- Claim 15 (new): The amino resin products according to Claim 5 as sheet textile structures or coatings.
- Claim 16 (new): The amino resin products according to Claim 6 as sheet textile structures or coatings.
- Claim 17 (new): The amino resin products according to Claim 7 as sheet textile structures or coatings.
- Claim 18 (new): The amino resin products according to Claim 8 as sheet textile structures or coatings.
- Claim 19 (new): The amino resin products according to Claim 9 as sheet textile structures or coatings.